

## Claims

1. Process for the liquid impervious sealing of smallest crevices, chinks, capillaries and/or openings in walls of housings, where at least certain gas permeability has to be  
5 obtained, characterised in that the housing wall, at least in the area of the crevices, chinks, openings or capillaries, is provided with a hydrophobic coating.
2. Process according to claim 1 for the liquid impervious sealing of housing chambers, compartments, sections which  
10 are closed against the exterior and at which a certain gas exchange with the environment has to be guaranteed, characterised in that in the area of the chamber, the compartment or the section crevices, chinks, capillaries and the like which exist within the housing wall, are  
15 provided with a hydrophobic coating.
3. Process according to one of the claims 1 or 2, characterised in that the housing or casing wall or its surface in the area of the crevices, chinks, capillaries or openings, shall be coated with hydrophobic nano-particles.
- 20 4. Process according to one of the claims 1, 2 or 3, characterised in that the hydrophobic coating, by using hydrophobic nano-particles, is produced by a so called Sol-Gel process.
5. Process according to one of the claims 1 or 2,  
25 characterised in that the hydrophobic coating is achieved by coating of the housing wall with the aid of hydrated silanes or hydro-silicones or fluorine containing polycondensates.

6. Process according to one of the claims 1 or 2, characterised in that the coating is executed by using a low temperature plasma evaporation process, the coating of a compact polymer layer is achieved by depositing a  
5 fluorine containing polymer on the housing wall.
7. Use of the process according to one of the claims 1 to 6 for the liquid impervious sealing of crevices, chinks or capillary openings in housing walls of electrical or electronic smallest devices, such as smallest devices in  
10 medicine, such as in particular hearing aid devices.
8. Use of the process according to one of the claims 1 to 6 for the liquid impervious sealing of a battery compartment in a hearing aid device.
9. Housing of electrical or electronic devices,  
15 containing crevices, capillary openings or chinks which have to be sealed against penetration of humidity but not against penetration of gas, characterised in that the housing wall in the area of the crevices, capillaries or chinks has a hydrophobic coating.
- 20 10. Housing according to claim 9, characterised in that the hydrophobic coating is such that the minimal contact angle to water at room temperature is at least 100°C.
11. Housing according to one of the claims 9 or 10, characterised in that the hydrophobic coating has a layer  
25 thickness which is at least 5 micrometers.
12. Battery compartment of a hearing aid device, characterised in that at the area of the housing wall of

the hearing aid device near to or at the battery compartment is provided with a hydrophobic coating.